

15-CT-5344
PATENT

$$\begin{aligned} q_1 &= (1 - t_2^\alpha - t_3^\alpha) e_1, \\ q_2 &= (1 - t_2^\alpha - t_3^\alpha) e_2 + (t_2^\alpha + t_3^\alpha) t_2, \\ q_3 &= (t_2^\alpha + t_3^\alpha) t_3. \end{aligned}$$

(7)

IN THE CLAIMS

1. (once amended) A method for imaging an object with a computed tomographic (CT) imaging system, comprising the steps of:

helically scanning the object with a multi-slice CT imaging system to acquire attenuation measurements of the object, the measurements including more than two conjugate samples;

estimating a projection at a plane of reconstruction of the object using the attenuation measurements of the object, including the more than two conjugate samples; and

filtering and backprojecting the attenuation measurements of the object, including the more than two conjugate samples, to reconstruct at least one image slice of the object.

15. (once amended) A computed tomographic (CT) imaging system for imaging an object, said system comprising a radiation source and a multi-slice detector configured to acquire attenuation measurements of an object between said radiation source and said multi-slice detector, said system configured to:

helical scan the object to acquire attenuation measurements of the object, said measurements including more than two conjugate samples;

estimate a projection at a plane of reconstruction of the object using the attenuation measurements of the object, including the more than two conjugate samples; and

filter and backproject the attenuation measurements of the object, including the more than two conjugate samples, to reconstruct at least one image slice of the object.